UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,843	03/06/2001	Richard J. Langley	21-0005	3680

7590	05/20/2004	**EXAMINER**	
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ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☐ All　b)☐ Some * c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment filed March 18, 2004 (paper # 3/a) has been entered and

made of record.

Applicant's arguments, see page 8 lines 12- 14, filed March 18, 2004, with

respect to the rejection(s) of claim(s) 1 -12, under 103(a) rejection have been fully

considered and are persuasive.Therefore, the rejection has been withdrawn. However,

upon further consideration, a new ground(s) of rejection is made in view of Hiramatsu

(US.5, 180,901).

Claim Rejections - 35 USC 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
>
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
>
> the prior art are such that the subject matter as a whole would have been obvious at the time the
>
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3 -7,9 and 10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hiramatsu (US.5,180,901), in view of Fujimoto et al. (US.5,177,802).

As per claims 1, 3 and 7, Hiramatsu discloses a method for performing biometric

identity verification with improved accuracy, the method comprising the steps of:

scanning at least two biometric features of a user simultaneously (column 4,

lines 26- 31), using at least two practically identical biometric scanners (fig 3, item 1 and

3 are two sensors, which corresponds two identical biometric scanners, column 4, line

54 through column 5, line 20);

processing data from the at least two scanners (fig 2, item I and 3) in at least one

processor (fig 3, item 9, corresponds to one processor), to obtain biometric data that

uniquely identify the scanned biometric features (column 4, line 57 through column 5

line 20, column 9, lines 18- 24); and

comparing the biometric data with reference biometric data recorded from the

user during an enrollment procedure (fig 3, item 7 and 8, stores data indicating a finger

characteristic of a card owner), to verify the identity of the user (fig 3, column 5, lines 1-

21);

Hiramatsu discloses an IC card having an individual authentication function for

authenticating whether a user of a card is a registered owner of the card. The card main

body 10 consists of two scanners, a pressure sensor 1, and an authenticity sensor 3 for

detecting whether a finger is authentic (see fig 1 and 2, column 4, lines 13-31).

Hiramatsu reference talks about a sequence of processing of finger characteristic data

of the card holder, such as registration and collation to check whether the two finger

characteristic data coincide with each other and also to see whether a finger is authentic

or not thereby, to prevent such an illegal use of cards, it must be confirmed that a card

is authentic or a user of a card is its owner. Hiramatsu reference does not talk about

specific details of multiple scanner scanning simultaneous to provide desirable

improvements in accuracy and processing speed, at a lower cost than by using a

single, larger biometric scanner.

Fujimoto discloses a fingerprint input apparatus, which is suitable for fingerprint collation or identification. The system comprises of:

wherein simultaneous use of multiple biometric scanners(fig 43A item 2213, 2241, fig 44A item 2242 , corresponds to multiple sensors, column 17, lines 57- 61) provides desirable improvements in accuracy and processing speed, at a lower cost than by using a single, large biometric scanner (column 17, lines 43- 61, column 23, lines 54- 63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hiramatsu to include the use of multiple biometric scanners scanning simultaneous to provide improvements in accuracy ... . It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hiramatsu by the teaching of Fujimoto in which two-dimensional image sensors which are located for picking up two or more fingerprint images and concurrently collating them . It results in lowering ambiguity appearing in the fingerprint recognition and improving the reliability, (as suggested by Fujimoto at column 17, lines 59- 61).

As to claim 4, Hiramatsu discloses an IC card having an individual authentication function for authenticating whether a user of a card is a registered owner of the card. The card main body 10 consists of two scanners, a pressure sensor 1, and an authenticity sensor 3 for detecting whether a finger is authentic (see fig 1 and 2, column 4, lines 13-31). Hiramatsu is silent about specific details of scanning at least two two-dimensional scanners.

Fujimoto discloses a fingerprint input apparatus, which is suitable for fingerprint collation or identification. The system comprises of:

wherein the step of scanning at least two fingerprints includes scanning the fingerprints (fig 42, shows two fingers F1 and F2, column 7, lines 40- 56, column 17, lines 42- 61, column 31, lines 53- 57, fig 37 and 38 providing two sensors 2242 and 2243, column 32, lines 10-37) with at least two two-dimensional scanners (fig 21B, column 5, lines 54- 68) scanners (fig 37 and 38 providing two sensors 2242 and 2243, column 32, lines 10- 27). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hiramatsu to include scanning at least two two-dimensional scanners. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hiramatsu by the teaching of Fujimoto infact, makes it possible to reliable the input fingerprint pattern without any adverse effect of the residual fingerprint, (as suggested by Fujimoto at column 7, lines 21- 23).

Regarding claim 5, Hiramatsu discloses an IC card having an individual authentication function for authenticating whether a user of a card is a registered owner of the card. The card main body 10 consists of two scanners, a pressure sensor 1, and an authenticity sensor 3 for detecting whether a finger is authentic (see fig 1 and 2, column 4, lines 13-31). Hiramatsu reference discloses a CCDs obtaining two fingers one the authentic and second fake finger, based on the operation of alignment and the collation these two fingers coincide with each other. The system comprises of:

scanning at least two fingerprints of a user simultaneously (column 4, lines 57-68, column 5, lines 1- 20, fig 2, item 1 and 3 are identical scanners, column 4, lines 26-34) one-dimensional scanners (fig 10, column 7, lines 61- 68);

processing data from the at least two scanner in at least one processor (column 4, lines 57- 68, column 5, lines 1- 20), including converter one-dimensional scanner data to two-dimensional fingerprint data (fig 10, column 7, lines 57- 68, column 8, lines 1- 4), to obtain biometric data that uniquely identify the scanned biometric features (column 4, lines 57- 68, column 5, lines 1- 20).

comparing the biometric data with reference biometric data recorded from the user during an enrollment procedure, to verify the identity of the user (fig 3, column 4, lines 57- 68, column 5, lines 1- 20);

wherein simultaneous use of multiple biometric scanners provides desirable improvements in accuracy and processing speed, at a lower cost than by using a single, large biometric scanner (column 4, lines 57- 68, column 5, lines 1- 20, column 8, line 11 through column 9, line 53).

Hiramatsu is silent about specifics details of relative swiping of at least two fingers across at least two practically identical one-dimensional scanners.

Fujimoto discloses a fingerprint input apparatus, which is suitable for fingerprint collation or identification. The system comprises of:

of relative swiping of at least two fingers across (fig 42, shows two fingers F1 and F2, column 7, lines 40- 56, column 17, lines 42- 61, column 31, lines 53- 57) at least two practically identical one-dimensional (fig 21B, column 5, lines 54- 68) scanners (fig 37

and 38, providing two sensors 2242 and 2243, column 32, lines 10- 14). Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

modify Hiramatsu to include a relative swiping of at least two fingers across at least two

practically identical one-dimensional scanners. It would have been obvious to one of

ordinary skill in the art at the time of the invention to have modified of Hiramatsu by the

teaching of Fujimoto in order to lower ambiguity appearing in the fingerprint

identification or collation, and also the improving the reliability of fingerprint identification

system (as suggested by Fujimoto at column 17, lines 59- 61).

As per claim 6, Fujimoto discloses a method wherein the step of scanning at

least two fingerprints uses a single (fig 42, talks about two fingers F1 and F2, column 7,

lines 40- 56, column 17, lines 42- 61), logically segmented one-dimensional scanner (fig

21B, column 5, lines 54- 68).

As per claim 9, Fujimoto discloses a wherein the scanners are fingerprint

scanners, for scanning at least two fingerprints of the user simultaneously (fig 42, shows

two fingers F1 and F2, column 7, lines 40- 56, column 17, lines 42- 61, column 31, lines

53- 57, fig 37 and 38 providing two sensors 2242 and 2243, column 32, lines 10-37).

As per claim10, Fujimoto discloses a system wherein the fingerprint scanners are

two dimensional scanners (fig 21B, column 5, lines 54- 68, fig 37 and 38 providing two

sensors 2242 and 2243, column 32, lines 10- 27).

3.   Claims 2,11 and 12 is rejected under 35 U.S.C. 103(a) as being unpatentable

over unpatentable over Hiramatsu (US.5,180,901), in view of Riganati et al. (US.

4,151,512).

As per claim 2, claim 2 recites similar limitation as claim 1 above and similarly analyzed. Hiramatsu is silent about specific details of processing at least two processors operating in parallel; and wherein simultaneous use of multiple biometric scanners.

Riganati discloses automatic pattern processing system. The system comprises of: wherein simultaneous use of multiple biometric scanners (the system could be modified to scan the plurality of fingerprints in parallel or serial and to feed that information to the information processor, fig 2A and 2B item 20, column 7, lines 40- 52, column 8, lines 42- 60). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hiramatsu to include the step of processing at least two processors operating in parallel. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hiramatsu by the teaching of Riganati in order to achieve the most efficient use of parallel processing and shortens the recognition processing time (as suggested by Riganat at column 7, lines 50- 52).

Regarding claims 11 and 12, Hiramatsu discloses a system for performing biometric identity verification with improved accuracy, the method comprising the steps of:

at least two practically identical one-dimensional (fig 10, column 7, lines 57- 68, column 8, lines 1-4) fingerprint scanners (column 4, lines 57- 68, column 5, lines 1-20, fig 2, item 1 and 3 are identical scanners, column 4, lines 26- 34), for scanning at least

two fingerprints of a user simultaneously, column 4, lines 57- 68, column 5, lines 1-20,

fig 2, item 1 and 3 are identical scanners, column 4, lines 26- 34);

including converting one-dimensional scanner data to two-dimensional fingerprint

data (fig 10, column 7, lines 61-68);

comparing the biometric data with reference biometric data recorded from the

user during an enrollment procedure, to verify the identity of the user (column 3, lines

34- 55);

wherein simultaneous use of multiple biometric scanners provides desirable

improvements in accuracy (column 1, lines 43- 45) and processing speed, at a lower

cost than by using a single, large biometric scanner (column 1, lines 64- 67, column 2,

lines 1-13, column 4, 18- 31, 45- 52).

Hiramatsu is silent about specific details of processing at least two processors

operating in parallel.

Riganati discloses automatic pattern processing system .The system comprises

of:

two processors ordinarily in parallel (column 7, lines 40- 52) each including

conversion logic (column 9, lines 9-21, 49- 55), for processing data from the at least two

scanners to obtain biometric data that uniquely identify the scanned biometric feature

(column 6, lines 55- 68, column 7, lines 1 - 52. Therefore, it would have been obvious to

one of ordinary skill in the art at the time of the invention to modify Hiramatsu to include

the step of processing at least two processors operating in parallel. It would have been

obvious to one of ordinary skill in the art at the time of the invention to have modified

Hiramatsu by the teaching of Riganati in order to achieve the most efficient use of

parallel processing and shortens the recognition processing time (as suggested by

Riganat at column 7, lines 50- 52).

4.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Hiramatsu (US.5,180,901), in view of Fujimoto et al. (US.5,177,802), as applied to

claims 1, 3-7, 9 and 10 above and further in view of Riganati et al. (US. 4,151,512).

Regarding claim 8, Hiramatsu is silent about specific details of processing

at least two processors operating in parallel; and wherein simultaneous use of

multiple biometric scanners.

Riganati discloses automatic pattern processing system. The system comprises

of: wherein simultaneous use of multiple biometric scanners (the system could be

modified to scan the plurality of fingerprints in parallel or serial and to feed that

information to the information processor, fig 2A and 2B item 20, column 7, lines

40- 52, column 8, lines 42- 60). Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to modify Hiramatsu to include the

step of processing at least two processors operating in parallel. It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify Hiramatsu

by the teaching of Riganati in order to achieve the most efficient use of parallel

processing and shortens the recognition processing time (as suggested by Riganat at

column 7, lines 50- 52).

Other prior art cited

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sabatini et al. (US.6, 628,377 B1) discloses scanning optical semiconductor fingerprint detector.

Meadows, II et al. (US.5, 869,822) discloses automated fingerprint identification system.

Takeda et al. (US.5, 073,949) discloses personal verification apparatus.

Contact Information

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sheela C Chawan whose telephone number is 703-

305- 4876. The examiner can normally be reached on Monday - Thursday 6 - 7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan
Patent Examiner
Group Art Unit 2625
May 6, 2004

TIMOTHY M. JOHNSON
PRIMARY EXAMINER